In the Claims

Please amend claims 19, 20, 22, 23, 25 and 26.

Listing of Claims

Claims 1-18 (canceled)

19. (currently amended) A method for defect compensation in a color image sensor having pixels, the method comprising the steps of:

predetermining a first threshold;

selecting a first pixel and defining a corresponding first window that includes the first pixel;

determining whether the first pixel is a peak by checking whether it has a color difference larger than the first threshold from two adjacent pixels of the same color which are adjacent to the first pixel;

if the first pixel is determined to be a peak, confirming whether it is a defect, before determining whether a pixel next to the first pixel is a peak;

selecting a second pixel and defining a corresponding second window that includes the second pixel;

determining whether the second pixel is a peak by checking whether it has a color difference larger than the first threshold from two adjacent pixels of the same color which are adjacent to the second pixel; and

when the first pixel is not one of the two adjacent pixels of the second pixel, but is within the second window, storing 1-bit information of the first pixel, indicating whether it is a peak.

20. (currently amended) The method of claim 19, ~~further comprising~~ wherein the step confirming whether the first pixel is a defect comprises:

providing a second threshold; and

confirming ~~a peak~~ the first pixel to be a defect if no other pixel in the first window is a peak and if two pixels immediately adjacent to the ~~peak~~ the first pixel both have color differences smaller than the second threshold from their two adjacent pixels of the same color.

21. (previously presented) The method of claim 20, further comprising: correcting a color value of the defect.

22. (currently amended) An apparatus for defect compensation in a color image sensor having pixels, the apparatus comprising: a memory device; and a processor implementing the steps of:

selecting a first pixel and defining a corresponding first window that includes the first pixel;

determining whether the first pixel is a peak by checking whether it has a color difference larger than a predetermined first threshold from two adjacent pixels of the same color which are adjacent to the first pixel;

<u>if the first pixel is determined to be a peak, confirming whether it is a defect, before determining whether a pixel next to the first pixel is a peak;</u>

selecting a second pixel and defining a corresponding second window that includes the second pixel;

determining whether the second pixel is a peak by checking whether it has a color difference larger than the first threshold from two adjacent pixels of the same color which are adjacent to the second pixel; and

when the first pixel is not one of the two adjacent pixels of the second pixel, but is within the second window, storing 1-bit information of the first pixel in the memory device, indicating whether it is a peak.

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23. (currently amended) The apparatus of claim 22, wherein the step implemented by the processor for confirming whether the first pixel is a defect comprises ~~the processor further implements the step of~~: confirming ~~a peak~~ the first pixel to be a defect if no other pixel in the first window is a peak and if two pixels immediately adjacent to ~~the peak~~ the first pixel both have color differences smaller than a predetermined second threshold from their two adjacent pixels of the same color.

24. (previously presented) The apparatus of claim 23, wherein the processor further implements the step of: correcting a color value of the defect.

25. (currently amended) A method for defect compensation in an image sensor having pixels, the method comprising the steps of:

predetermining a first threshold;

selecting a first pixel and defining a corresponding first window that includes the first pixel;

determining whether the first pixel is a peak by checking whether it has a difference larger than the first threshold from two adjacent pixels of the first pixel;

if the first pixel is determined to be a peak, confirming whether it is a defect, before determining whether a pixel next to the first pixel is a peak;

selecting a second pixel and defining a corresponding second window that includes the second pixel;

determining whether the second pixel is a peak by checking whether it has a difference larger than the first threshold from two adjacent pixels of the second pixel; and

when the first pixel is not one of the two adjacent pixels of the second pixel, but is within the second window, storing 1-bit information of the first pixel, indicating whether it is a peak..

26. (currently amended) The method of claim 25, further comprising:

providing a second threshold; and

confirming ~~a peak~~ the first pixel to be a defect if no other pixel in the first window is a peak and if two pixels immediately adjacent to ~~the peak~~ the first pixel both have differences smaller than the second threshold from their two adjacent pixels.

27. (previously presented) The method of claim 26, further comprising: correcting a value of the defect.